Application of Core Excision in the Treatment of Keloid

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Background:

In the treatment of keloid, surgery combined with radiation therapy is a very effective treatment, and the recurrence rate is relatively low. However, in some small areas with multiple keloids, direct surgical resection is difficult. If the wound tension is too large to be sutured directly after the resection of the pathological tissue, skin grafting or flap transfer is needed to close the wound and increase new wounds, and the local tension after suturing is too large, which may lead to new scars in the operative area. Therefore, we suggest that small keloid lesions, especially those with sloping edges, can be performed coreexcision.

Methods:

Retrospective analysis was performed on the patients who underwent core excision in our hospital from January 2021 to December 2021, and they were divided into high tension group (chest, shoulder, mandible, limb group) and low tension group (ear group) according to scar sites. For each scar, a separate core resection was performed, an incision was designed along the long axis of the scar, 1mm scar epidermal and dermal tissue were retained on both sides, the core collagen of the scar was removed, and the scar flap was sutured and fixed, and 12Gy electron-beam radiation therapy was performed once within 24 hours after surgery. After 1 year of follow-up, silicone gel and silicone sheet were routinely used for treatment. If scar hyperplasia occurred, local steroid injection was given, once every one month; if scar hyperplasia continued more than 6 months after surgery, carbon dioxide fraction laser treatment was given, and once electron-beam radiotherapy was given within 24 hours after treatment with a radiation dose of 12Gy. The patient and observer scar assessment scale (POSAS) was applied before and one year after treatment (recorded as after treatment) to evaluate the changes of keloid before and after treatment, and the efficacy was determined according to the efficacy criteria such as Liu Wenge.

Results:

A total of 52 patients were included, 331 cases of keloid, 298 cases were cured, 29 cases were effective, 4 cases were ineffective, the total effective rate was 98.79%. In 259 cases of high tension group, 231 cases were cured, 24 cases were effective, 4 cases were

ineffective, the total effective rate was 98.46%; In the hypotonic group of 72 cases, 67 cases were cured, 5 cases were effective, 0 cases were ineffective, and the total effective rate was 100%. The total POSAS score after treatment was significantly lower than that before treatment ($P<0.05$), and there was no significant difference between the high tension group and the low tension group.

Conclusion:

Core excision combined with postoperative electron-beam radiation therapy is a safe and effective treatment for keloid, especially for ear part.

Key words:

Keloid, Core excision, Radio therapy, Operation.

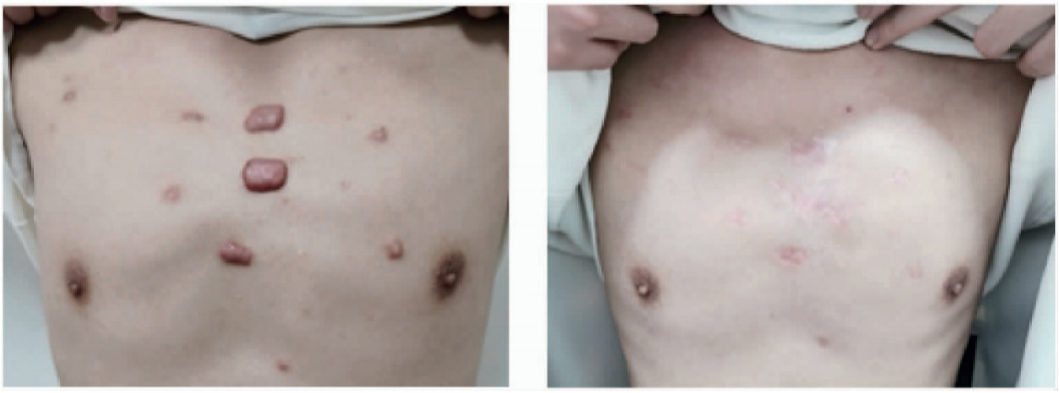

Fig 1. Left: Before treatment; Right: 12 months after treatment

Fig 2. Left: Before treatment; Right: 13 months after treatment